

## ***Appendix I***

### **#9 - Gaps in AEA Regulatory Authority/Role of States**

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## **GAPS IN AEA REGULATORY AUTHORITY/ROLE OF STATES**

### ***Issue***

Should gaps be closed under existing regulatory authority under the Atomic Energy Act (AEA) by extending to the external regulator jurisdiction over facility safety for hazards beyond source, special nuclear, and by-product materials, and by extending to the Occupational Safety and Health Administration (OSHA) worker protection jurisdiction for all the Department of Energy (DOE) and DOE contractor employees? What role should the States assume in regulatory authority over facility safety and worker protection at DOE nuclear facilities?

### ***Background***

In its December 1995 final report, the Advisory Committee on External Regulation (Advisory Committee) discussed the potential gaps in external regulatory authority for facility safety and worker protection, and also discussed the role of the States in those areas. Taking facility safety first, the Nuclear Regulatory Commission's (NRC) jurisdiction under the AEA has been interpreted to extend only to radiological hazards from source, special nuclear, and by-product materials, and does not include other sources of radiation (accelerator-produced radiation or materials and naturally occurring radioactive materials, such as radium) or non-radiological hazards (physical and chemical) all of which DOE regulates in its AEA-authorized facilities under Section 161(i)(3). Independent authority to regulate non-AEA sources of radiation (X-ray sources, accelerators, and most naturally occurring radioactive materials) exists with the States. States also regulate the hazards of both nuclear and non-nuclear materials at Federal facilities under most Federal environmental statutes (Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA] is the principal exception, although even here States have a strong role in the selection of standards and remedies), and States may regulate certain classes and quantities of man-made radioactive materials under the AEA. Certain States (29 to date) called "Agreement States" have authority from NRC to regulate NRC non-reactor licensees under the AEA. The AEA requires the Agreement States' standards to be "compatible"; standards of 13 of the 29 States are fully compatible, while 16 are not completely compatible. Environmental statutes explicitly allow more protective standards to be issued by the States, as does the Occupational Safety and Health Act. NRC has advised DOE to carefully evaluate this Agreement State model for the following reasons: (1) States usually have a 3-year lag time in promulgating compatible regulations; (2) more stringent regulations are possible; (3) States may have limited expertise in specific technical areas (reactors, materials or waste processing, special nuclear materials control, etc.); and (4) States may have limited ability to follow up on allegations and events. On the other hand, the Advisory Committee noted that many States have strong regulatory capabilities, can relieve Federal regulators of significant burdens, and usually have superior knowledge of local conditions. This is a view endorsed by the Conference of Radiation Control Program Directors, Inc., recommending in a March 18, 1996, letter to Senator Glenn that AEA material

(other than reactors and special nuclear materials facilities) be regulated by Agreement States and that DOE non-AEA nuclear facilities (accelerators, radiographic facilities, etc.) and material be regulated by the States. The Advisory Committee concluded: "In keeping with decades of precedent under most Federal safety and environmental statutes, the Advisory Committee believes the States should continue to exercise their current authorities and in addition should be able to exercise considerable regulatory authority over facility safety and worker protection at DOE nuclear sites, so long as this does not lead to the regulatory overlap problems described earlier. As is the case in the private sector, the Advisory Committee recommends that certain limitations on State authority should continue. For example, at DOE reactors or high level waste repositories, States should not regulate facility safety or worker protection. States should be able to enact more stringent standards, even in the area of facility safety, as long as these do not unduly hinder a DOE mission."

DOE has a number of facilities or activities that involve other sources of radiation that do not involve radiological hazards from source, special nuclear, and by-product materials. These include the Stanford Linear Accelerator Center, Fermi National Accelerator Laboratory, the Continuous Electron Beam Accelerator Facility, and Lawrence Livermore National Laboratory's Radiography Facility (Building 239). DOE's nuclear facilities also involve non-radiological systems and components that have a significant safety risk to the worker, the public, and the environment. NRC looks at non-radiological hazards at its licensees' facilities only if such systems/components/activities are potentially linked to onsite radiological hazards. NRC and OSHA have operated for several years under a memorandum of understanding (MOU) that assigns this responsibility to NRC. However, the Advisory Committee believes that, especially as the mission of the overall DOE complex moves away from reactors/materials production and processing to deactivation and decontamination/decommissioning and cleanup, OSHA or the States should be authorized to regulate the non-radiological hazards at DOE facilities in acknowledgment of the predominance of chemical and physical hazards. This authority would be usurped only when regulation of occupational-related risks could significantly interfere with maintenance of facility safety (e.g., nuclear criticality). The Advisory Committee concluded that "gaps in regulatory authority under the AEA, as currently exercised by NRC, should be closed by extending to any external regulator of facility safety, for DOE nuclear facilities, the authority currently given to DOE under the AEA."

Regarding worker protection, there are also some potential gaps in the coverage of workers, even assuming extension of OSHA and State jurisdiction over worker protection at DOE facilities. To begin with, the OSH Act does not extend to State employees, and some of DOE's laboratories are operated by State universities. Although most such States have OSHA-approved plans and therefore can be expected to apply to State employees standards comparable to OSHA's standards, they may not be able or willing to assume a major role in regulating large DOE facilities, especially at out-of-State locations. Moreover, when employees of one State work at a DOE facility in another State, such as a University of California employee working at Los Alamos, it is not clear if the employee is covered by either State, even though both are OSHA Plan States.

The situation on worker protection is complex with regard to jurisdiction (e.g., DOE, NRC, OSHA, Environmental Protection Agency [EPA], and the States) and applicable statutes (e.g., AEA, OSH Act, Resource Conservation and Recovery Act [RCRA]/CERCLA, and State law), which vary as a function of the type of occupational hazard (physical, chemical, or radiological). A brief summary of the situation follows.

- ▶ **Department of Energy.** DOE assumes jurisdiction over all aspects of worker safety (physical, chemical, and radiological) for contractor and subcontractor employees at facilities authorized under the AEA. DOE contractor and subcontractor employees at facilities not authorized under AEA (e.g., all non-nuclear facilities, such as the Morgantown and Pittsburgh Energy Technology Centers, the National Renewable Energy Center, and all of the various power administrations) fall under OSHA or OSHA-delegated State jurisdiction. Moreover, DOE Federal employees at all DOE facilities are protected under the OSH Act, which requires Federal agencies to maintain OSHA-based occupational safety and health programs, subject to inspection and investigation of worker complaints by OSHA, unless specifically exempted (and DOE is not).

This situation dates from 1974 when the Department of Labor (DOL) granted an exemption to the former AEC under Section 4(b)(1) of the OSH Act through an exchange of letters, based on the AEC's authority (Section 161(i)(3) of the AEA) to regulate contractor or subcontractor operations at facilities authorized under the AEA. This was formalized by DOL and DOE in a MOU on August 10, 1992, and is implemented under DOE Order 5483.1A, which specifies protection consistent with that required by OSHA in private industry. The MOU also provides DOE access to OSHA expertise and feedback on the adequacy of DOE's worker safety and health programs.

Inspections for contractor compliance are performed by the DOE Operations Offices, Headquarters Program Offices, and the Office of Environment, Safety and Health. In addition, the Defense Nuclear Facilities Safety Board (DNFSB) provides oversight that includes worker safety issues at defense facilities (note, however, DNFSB's focus is on radiation issues). For DOE operations not exempted from the OSH Act, inspections may be performed by OSHA or an authorized State. If violations are identified that involve Federal employees, a citation goes to DOE that identifies the alleged violation and specifies the abatement date, but that includes no fine. If the violation involves DOE contractor personnel, a similar citation goes directly to the contractor, but it includes a proposed civil penalty. When contractors are cited, negotiations to achieve closure are carried out between the contractor and OSHA or the State.

In May 1993, Secretary O'Leary announced that DOE would immediately begin the process of shifting, within a period of 3 to 5 years, from partial internal oversight of occupational safety and health to complete external enforcement by OSHA. DOE and DOL have signed an MOU that provides DOE with funding for an independent group

(the National Academy of Public Administration) to “. . . explore, identify, and develop strategies to facilitate a seamless transition from internal DOE oversight to external OSHA enforcement of occupational health and safety” at DOE's AEA-authorized contractor facilities. In addition to examining the current DOE program and initiatives, the group's study will identify a transition schedule and resources required by OSHA to assume regulatory and enforcement authority.

In October 1994, DOE initiated a Voluntary Protection Program (VPP) for its contractors, modeled after the OSHA VPP for private industry. This program relieves facilities with exemplary worker protection programs from routine inspections and decreases regulatory oversight onsite inspection (and therefore resource) requirements. One DOE facility (the Waste Isolation Pilot Plant) has qualified, and about half of all DOE contractors have applications in process. DOE also recently became the first government member of the VPP Participants Association, a consortium of about 240 private-sector VPP programs.

In December 1994, DOE and DOL concluded an MOU governing worker protection at DOE's gaseous diffusion plants leased to the United States Enrichment Corporation prior to their being “certified” by NRC. This agreement gives OSHA the responsibility for physical and chemical hazards, and shares the responsibility for radiological hazards. After NRC certification, this shared responsibility for radiological hazards will shift exclusively to the NRC. DOL and NRC are working on an MOU that lays out the respective responsibilities for worker protection at these two plants.

- ▶ **Environmental Protection Agency.** EPA's current involvement in worker protection (aside from its regulatory functions under the Toxic Substances Control Act, and worker standards functions for radiological emergency response) is limited to its cleanup and remedial action responsibilities under CERCLA/RCRA. Conformance to OSHA safety standards is required for all site cleanup and corrective operations carried out under CERCLA or RCRA, as well as hazardous waste operations at sites designated by State or local authorities and emergency response to fires, explosions, and chemical accidents. CERCLA requires the development of specific standards for cleanup workers by OSHA; these are codified at 29 CFR 1910.120. EPA has also codified these requirements (40 CFR 311) for application to workers in situations that are not under OSHA jurisdiction (e.g., State and local employees). EPA carries out its site safety inspections jointly with OSHA at RCRA/CERCLA sites. EPA trains its personnel at OSHA's training institute, and has a continuing agreement to fund the costs of OSHA's own participation in RCRA/CERCLA activities.
- ▶ **Nuclear Regulatory Commission.** Like DOE, NRC, in its regulation of licensees, claims exemption from the OSH Act on the basis of Section 161(i)(3) of the AEA. Although the NRC exemption is less complete than DOE's—it does not include physical and chemical safety, but only where there is no actual or potential interaction

with AEA materials—as a consequence of its wide scope, there is essentially no OSHA presence at NRC licensee sites. In recent years, NRC has recognized the need to pay greater attention to physical and chemical safety, and has sent a few of its inspectors to OSHA's training institute. NRC inspectors maintain a much greater presence at licensee sites, especially those that involve power reactors and fuel cycle facilities, than is the case for OSHA inspectors.

- **Occupational Safety and Health Administration.** OSHA compliance activities are based on infrequent (compared to NRC) programmed inspections and response to worker complaints; OSHA does not have sufficient resources to conduct routine inspections on any more than an infrequent basis (much less than annually). For this reason, OSHA has been reluctant to assume oversight responsibility for DOE workers. OSHA has a comprehensive set of criteria for physical and chemical safety (including cleanup operations) that provides the basis for health and safety of workers nationwide. However, OSHA currently lacks inspectors trained in radiation hazards, and its outdated radiological safety criteria need revision to bring them into conformance with Federal radiation protection guidance for workers, DOE Orders, and NRC regulations.

One initiative that may ameliorate the resource situation is the “Maine 200” effort. In 1993, OSHA offered to work in partnership with the 200 most unsafe employers in Maine to implement comprehensive safety and health programs in their plants. During the first 18 months of the program, the businesses identified nearly 100,000 workplace hazards and then eliminated more than half of them, a rate more than 14 times higher than OSHA's own rate of identifying hazards through inspections. With the increase in the number of hazards identified, nearly 60 percent of the employers have reduced their injury and illness rates, workers' compensation claims, and insurance premiums. Shifting OSHA's emphasis from enforcement to compliance has increased its ability to protect workers. OSHA plans to adopt the most successful features of “Maine 200” in nine other states by the end of the year. OSHA will implement these programs by using worksite-specific data to identify high-hazard work sites; providing information to employers about safety and health programs; offering employers a partnership with OSHA; ensuring commitment by the employer and involvement from workers; and modifying enforcement policies for high-performance employers.

Given the complexity of the worker protection issue, the Advisory Committee concluded with a recommendation that “the OSH Act be amended to cover all DOE and DOE contractor employees at DOE nuclear facilities regulated by OSHA.”

### ***Discussion***

Regarding facility safety, the options are: (1) No change: DOE would continue to self-regulate other sources of radiation and non-radiological hazards; (2) Give regulatory authority to the external regulator for other sources of radiation and to the appropriate regulator

(e.g., OSHA or the State) for non-radiological hazards; and (3) Give regulatory authority to the States for other sources of radiation and to the appropriate regulator (OSHA or the State) for non-radiological hazards. Option 1 appears inconsistent with the recommendation for external regulation, especially when non-radiological hazards (not low-probability, high-consequence radiological incidents) have been identified as the dominant contributor to workforce impacts. Option 2 is consistent with the overall external regulatory movement, but NRC would not be given jurisdiction for non-radiological hazards (unless linked to radiological hazards). (The Advisory Committee has voiced concern about giving NRC jurisdiction over all non-radiological hazards, because it is unprecedented in the private nuclear sector). Option 3 is consistent with the external regulator concept, consistent with the current role of the States in effectively regulating non-AEA materials and sources, and is consistent with the predominance of non-nuclear hazards at DOE facilities. Under Option 3, it is recommended that the States be given the authority to set more stringent standards, but not to unduly hinder DOE's performance of its mission; such limitation is comparable to the limitation the OSH Act places on State authority for worker protection. Historically, although uniform standards are desirable for the sake of equity and efficiency, States have adhered closely to Federal standards even when they have had authority to do otherwise.

Regarding worker protection, OSHA has selected NAPA to conduct an assessment of the overall issues associated with transferring regulation over worker protection at DOE facilities to OSHA. Therefore, the Working Group will not address regulatory gaps related to OSHA's authority.

### ***Proposed Resolution***

- ▶ Regarding facility safety, Option 3.
- ▶ Regarding worker protection, consider the NAPA study.